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Under the provisions of Article 3, paragraph 6, of Act No. 34/1957 Coll., the right to make use of the invention is owned by the government.

Ing. Jan Sehnal, from Babice nad Svitavou, and Stanislav Kapouněk and Dr. Julius Belica, both from Brno

Equipment for moving pigs to the slaughter line in groups

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In the current method, before slaughter, the pigs are kept in stalls of around 50 animals and are successively herded by operatives into a waiting pen located beside the slaughter line. Various types of manual electric prodders are used to herd the pigs; these, however, do little to ease the laboriousness of the work.

The equipment that is the subject of this invention enables the pigs to be herded automatically without the intervention of operatives, while at the same time ensuring the even and uninterrupted functioning of the slaughter line.

The basis of the invention lies in the use of a walkway or race containing moving, sprung gates fitted with electric-shock contacts and sliding nozzles for high-pressure water jets.

A sample arrangement of the equipment is given in the attached schematic diagram, in which Fig. 1 shows a plan view of the race (where the pigs are divided according to their weight) in relation to the waiting pen beside the slaughter line, and Fig. 2 gives a side view of the mechanics of the gate.

The equipment for moving pigs to the slaughter line in groups is made up of a tubular race (1) for between 100 and 200 pigs, in which the pigs are separated according to weight into several subsections. These effectively replace the existing stalls. Each race contains a gate (2) which rides along the side walls (3) in two directions. Each gate is fitted with electric-shock contacts (4) which are charged by electric current from a power supply of the type used in electric fences. The gate is attached to the mounting (5) with springs (8), which on being pressed bring the individual bars of the gate into contact with the electric current.

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At the same time, pressing against the gate (2) causes high-pressure water to be carried to the nozzles (7) on the gate mounting (5) by means of a solenoid valve. When moving backwards, the gate (2) is raised into a horizontal position.

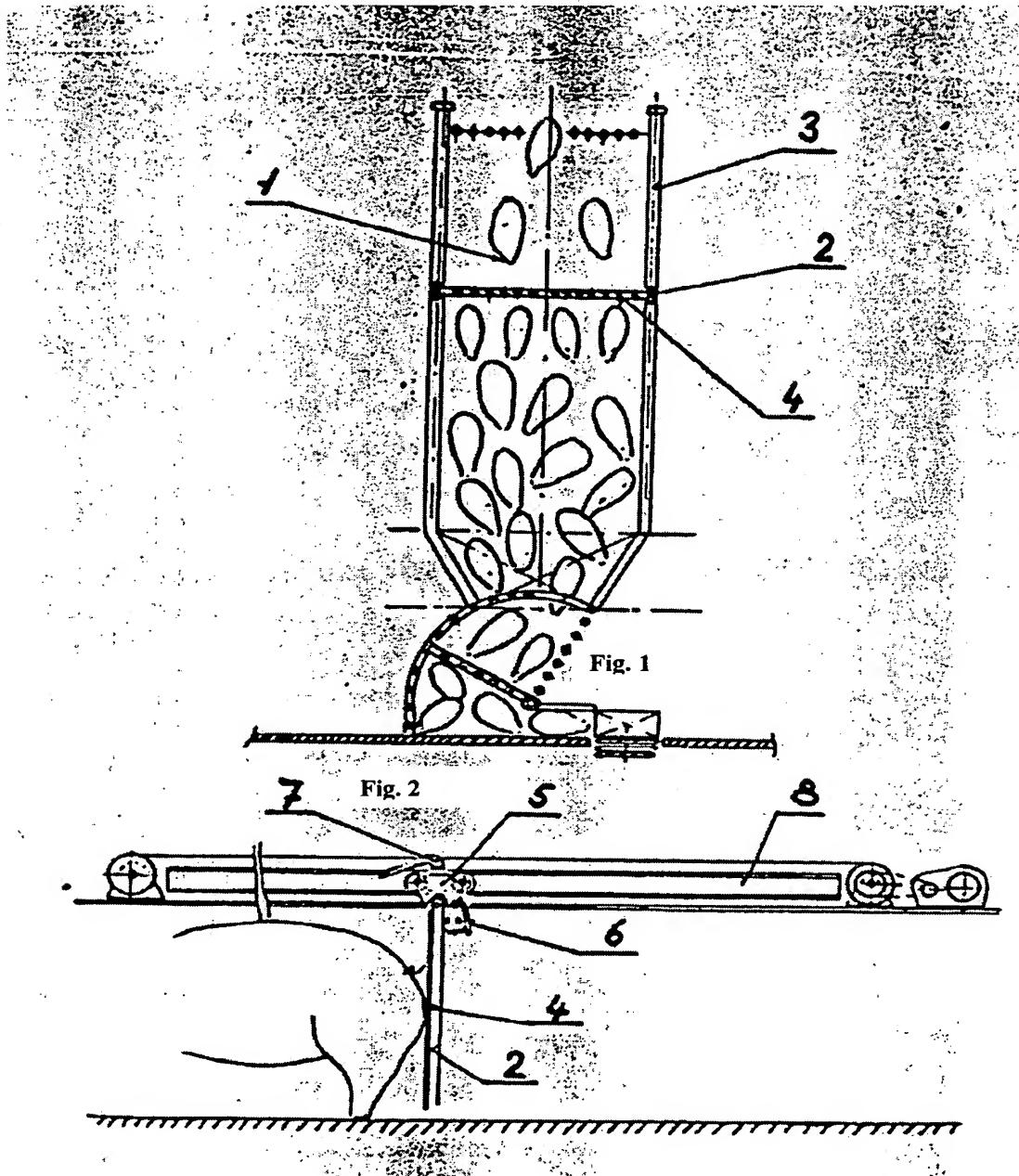
The pigs in the race are pushed forward by the gate towards the open door of the waiting pen at a speed corresponding with the speed of the slaughter line. If they resist the forward motion, the pressure they exert on the gate causes the springs to compress, which completes the electric circuit and opens the solenoid valve controlling the high-pressure water. The jet of water, which reaches several metres in front of the gate, directs the pigs in the required direction, and the electric prodders on the arms of the gate come into operation at the same time.

As the gate moves forward and the race empties, it is possible to herd additional pigs into the area behind the gate. After the area in front of the gate has been emptied of animals, the direction of travel of the gate can be reversed by means of a switch. As the gate moves backwards, it swings up into a horizontal position to travel over the heads of the pigs in the race until it reaches its original starting position, whereupon it swings back down into its vertical "working" position at the end of the race. It may then push another group of pigs through the passage at the front of the race (which is made of concrete tubes) into the waiting pen.

While the gate is moving back to the start of the race, the uninterrupted operation of the slaughter line may be maintained by moving pigs from a neighbouring race. The gate's mechanism may be operated remotely by an operative in the waiting pen who is responsible for herding the pigs into the stun pen.

SUBJECT OF THE PATENT

1. Equipment for moving pigs to the slaughter line in groups, distinguished by the fact that the race (1) is fitted with moving gates (2) which are spring-mounted (6) and fitted with sliding nozzles (7) for high-pressure water.
2. Equipment as described in point 1, distinguished by the fact that the gate (2) may swing up into a horizontal position for reverse movement above the pigs.

Appendix to Patent Record No. 110525**BEST AVAILABLE COPY**